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SCCSID = trginput.man v1.1 02/15/03


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==============================================================================
|      D R A F T     D R A F T     D R A F T     D R A F T     D R A F T     D R A F T     D R A F T     D R A F T      |
------------------------------------------------------------------------------
|                      SOUTH FLORIDA WATER MANAGEMENT MODEL V5.0                |
|                              INPUT MAN PAGE FOR                               |
|                                                                              |
|                                                                              |
|        trginput.dat == defines public water supply and irrigation cutback parameters        |
|                      (unit no.94) read in subroutine trigger_input from source file trg.F    |
|                                                                              |
| This file defines the parameter values for implementing short-term water supply restrictions in the Lower East |
| Coast of South Florida. The file primarily contains trigger water levels (as indicators for saltwater intrusion) |
| at pre-defined trigger well locations and corresponding irrigation and public water supply cutbacks.            |
==============================================================================


COLUMNS VARIABLE NAME                 FORMAT                              DESCRIPTION
------------------------------------------------------------------------------
1. TRIGGER INPUT PARAMETERS: (1 record total)
------------------------------------------------------------------------------
1-..    unit_trig_out                 Free    unit number for output data file
        echo_trig                     Free    unit number for output echo print
        min_lok_ssm_cnt               Free    minimum number of days LOK is in Supply-Side Management for
                                              cutbacks to be imposed in the LEC for the following month
------------------------------------------------------------------------------
2. PUBLIC WATER SUPPLY CUTBACK FRACTION: (1 record total)
------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-    def_cutback(1,phase)            Free    cutback fraction to be applied to public water supply
------------------------------------------------------------------------------
3. URBAN LANDSCAPE MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-    def_cutback(2,phase)            Free    Maximum net irrigation application rate (inches/month) for
                                              urban landscape irrigation
------------------------------------------------------------------------------
4. NURSERY MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-    def_cutback(3,phase)            Free    Maximum net irrigation application rate (inches/month) for
                                              nursery irrigation
------------------------------------------------------------------------------
5. GOLF COURSE MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
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--------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-      def_cutback(4,phase)           Free     Maximum net irrigation application rate (inches/month) for
                                                golf course irrigation
--------------------------------------------------------------------------------
6. AGRICULTURAL LOW VOLUME MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
--------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-      def_cutback(5,phase)           Free     Maximum net irrigation application rate (inches/month) for
                                                low volume irrigation
--------------------------------------------------------------------------------
7. AGRICULTURAL OVERHEAD MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
--------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-      def_cutback(6,phase)           Free     Maximum net irrigation application rate (inches/month) for
                                                overhead irrigation
--------------------------------------------------------------------------------
8.  AGRICULTURAL (OTHERS) MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
--------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-      def_cutback(7,phase)           Free     Maximum net irrigation application rate (inches/month) for
                                                other irrigation types
--------------------------------------------------------------------------------
9.  PUBLIC WATER SUPPLY CUTBACK FRACTION: (1 record total)
--------------------------------------------------------------------------------
1-      n_zone                         Free     number of trigger zones

          note: Set of records 10. through 25. is repeated for each trigger zone, i.e., zone = 1,n_zone.
--------------------------------------------------------------------------------
10. ZONE NUMBER: (1 record total)
--------------------------------------------------------------------------------
1-      zone1                          Free     zone number; must be specified in increasing order
--------------------------------------------------------------------------------
11. DEFINITION OF TWO CORNERS OF (RECTANGULAR) TRIGGER ZONE: (1 record total)
--------------------------------------------------------------------------------
          note: The following field is repeated on the same record for phase = 1,4.
1-      zone_corner(zone,1,1)          Free     model column number of lower left corner of trigger zone
        zone_corner(zone,1,2)          Free     model row number of lower left corner of trigger zone
        zone_corner(zone,2,1)          Free     model column number of upper right corner of trigger zone
        zone_corner(zone,2,2)          Free     model row number of upper right corner of trigger zone
--------------------------------------------------------------------------------
12. NUMBER OF TRIGGERS IN ZONE: (1 record total)
--------------------------------------------------------------------------------
1-      n_trigger(zone)                Free     number of triggers in zone

          note: Set of records 13. through 25. is repeated for each trigger, i.e., trig = 1,n_trigger(zone).
--------------------------------------------------------------------------------
13. TRIGGER TYPE: (1 record total)
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1-       t_type                          Free    type of trigger for trigger "trig" in zone "zone"; either
                                                 groundwater level (gwhd or GWHD) or canal name.
------------------------------------------------------------------------------------------------------
14. TRIGGER LOCATION AND TRIGGER HEADS BASED GROUNDWATER HEAD: (1 record total)
------------------------------------------------------------------------------------------------------
1-       tcell_col(zone,trig)            Free    model column location of trigger cell "trig" in zone "zone"
         tcell_row(zone,trig)            Free    model row location of trigger cell "trig" in zone "zone"
         trig_value(zone,trig,1)         Free    threshold  water levels (ft NGVD) below which cutback will be
                                                 triggerred by trigger cell "trig" in zone "zone" at water
                                                 restriction phase 1
         trig_value(zone,trig,1)         Free    threshold  water levels (ft NGVD) below which cutback will be
                                                 triggerred by trigger cell "trig" in zone "zone" at water
                                                 restriction phase 2
         trig_value(zone,trig,1)         Free    threshold  water levels (ft NGVD) below which cutback will be
                                                 triggerred by trigger cell "trig" in zone "zone" at water
                                                 restriction phase 3
         trig_value(zone,trig,1)         Free    threshold  water levels (ft NGVD) below which cutback will be
                                                 triggerred by trigger cell "trig" in zone "zone" at water
                                                 restriction phase 4
      note: This record is read in only if t_type = "gwhd" or GWHD".
------------------------------------------------------------------------------------------------------
15. TRIGGER PERIOD BASED ON GROUNDWATER HEAD: (1 record total)
------------------------------------------------------------------------------------------------------
1-       trig_period(zone,trig,1)        Free    minimum length of time (expressed as a fraction of the previous
                                                 month) when trigger "trig" in zone "zone" has to stay below
                                                 water level trig_value(zone,trig,1) as a necessary conditon
                                                 before a phase 1 water restriction is declared for all water
                                                 users (PWS and irrigation) in zone "zone"
         trig_period(zone,trig,2)        Free    minimum length of time (expressed as a fraction of the previous
                                                 month) when trigger "trig" in zone "zone" has to stay below
                                                 water level trig_value(zone,trig,2) as a necessary conditon
                                                 before a phase 2 water restriction is declared for all water
                                                 users (PWS and irrigation) in zone "zone"
         trig_period(zone,trig,3)        Free    minimum length of time (expressed as a fraction of the previous
                                                 month) when trigger "trig" in zone "zone" has to stay below
                                                 water level trig_value(zone,trig,3) as a necessary conditon
                                                 before a phase 3 water restriction is declared for all water
                                                 users (PWS and irrigation) in zone "zone"
         trig_period(zone,trig,4)        Free    minimum length of time (expressed as a fraction of the previous
                                                 month) when trigger "trig" in zone "zone" has to stay below
                                                 water level trig_value(zone,trig,4) as a necessary conditon
                                                 before a phase 4 water restriction is declared for all water
                                                 users (PWS and irrigation) in zone "zone"
      note: This record is read in only if t_type = "gwhd" or GWHD".
------------------------------------------------------------------------------------------------------
16. TRIGGER VALUE BASED CANAL LEVEL: (1 record total)
------------------------------------------------------------------------------------------------------
1-       trig_value(zone,trig,1)         Free    threshold  water levels (ft NGVD) below which cutback will be
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                                   triggerred by trigger cell "trig" in zone "zone" at water
                                   restriction phase 1
        trig_value(zone,trig,2)        Free    threshold  water levels (ft NGVD) below which cutback will be
                                   triggerred by trigger cell "trig" in zone "zone" at water
                                   restriction phase 2
        trig_value(zone,trig,3)        Free    threshold  water levels (ft NGVD) below which cutback will be
                                   triggerred by trigger cell "trig" in zone "zone" at water
                                   restriction phase 3
        trig_value(zone,trig,4)        Free    threshold  water levels (ft NGVD) below which cutback will be
                                   triggerred by trigger cell "trig" in zone "zone" at water
                                   restriction phase 4
          note: This record is read in only if t_type is a canal name that matches one of the canal names as
                defined in input file "canal_grid_loc.dat" or model array variable name "cnm()".
--------------------------------------------------------------------------------------------------------
17. TRIGGER PERIOD BASED ON CANAL LEVEL: (1 record total)
--------------------------------------------------------------------------------------------------------
1-      trig_period(zone,trig,1)       Free    minimum length of time (expressed as a fraction of the previous
                                   month) when trigger "trig" in zone "zone" has to stay below
                                   canal level trig_value(zone,trig,1) as a necessary conditon
                                   before a phase 1 water restriction is declared for all water
                                   users (PWS and irrigation) in zone "zone"
        trig_period(zone,trig,2)       Free    minimum length of time (expressed as a fraction of the previous
                                   month) when trigger "trig" in zone "zone" has to stay below
                                   canal level trig_value(zone,trig,2) as a necessary conditon
                                   before a phase 1 water restriction is declared for all water
                                   users (PWS and irrigation) in zone "zone"
        trig_period(zone,trig,3)       Free    minimum length of time (expressed as a fraction of the previous
                                   month) when trigger "trig" in zone "zone" has to stay below
                                   canal level trig_value(zone,trig,3) as a necessary conditon
                                   before a phase 1 water restriction is declared for all water
                                   users (PWS and irrigation) in zone "zone"
        trig_period(zone,trig,4)       Free    minimum length of time (expressed as a fraction of the previous
                                   month) when trigger "trig" in zone "zone" has to stay below
                                   canal level trig_value(zone,trig,4) as a necessary conditon
                                   before a phase 1 water restriction is declared for all water
                                   users (PWS and irrigation) in zone "zone"
          note: This record is read in only if t_type is a canal name that matches one of the canal names as
                defined in input file "canal_grid_loc.dat" or model array variable name "cnm()".
--------------------------------------------------------------------------------------------------------
18. FLAG FOR DEFAULT CUTBACK LEVELS: (1 record total)
--------------------------------------------------------------------------------------------------------
1-      check_default                  Free    flag to be used to check if default cutback levels (records 2
                                   through 8) are to be applied to this particular trigger "trig" and
                                   zone "zone";  either default values (default or DEFAULT) or non-
                                   default/special levels will be used. Cutback levels are assigned
                                   for a unique combination of zone, trigger, water use type (PWS
                                   or one of the six irrigation types) and water restriction phase.
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           note: Set of records 19. through 25. is read in only if check_default is different from "default"
                 or "DEFAULT".
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19. PUBLIC WATER SUPPLY CUTBACK FRACTION: (1 record total)
-------------------------------------------------------------------------------------------------------------
           note: The following field is repeated on the same record for phase = 1,4.
1-       cutback(zone,trig,1,phase)      Free    cutback fraction to be applied to public water supply
-------------------------------------------------------------------------------------------------------------
20. URBAN LANDSCAPE MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
-------------------------------------------------------------------------------------------------------------
           note: The following field is repeated on the same record for phase = 1,4.
1-       cutback(zone,trig,2,phase)      Free    Maximum net irrigation application rate (inches/month) for
                                                 urban landscape irrigation
-------------------------------------------------------------------------------------------------------------
21. NURSERY MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
-------------------------------------------------------------------------------------------------------------
           note: The following field is repeated on the same record for phase = 1,4.
1-       cutback(zone,trig,3,phase)      Free    Maximum net irrigation application rate (inches/month) for
                                                 nursery irrigation
-------------------------------------------------------------------------------------------------------------
22. GOLF COURSE MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
-------------------------------------------------------------------------------------------------------------
           note: The following field is repeated on the same record for phase = 1,4.
1-       cutback(zone,trig,4,phase)      Free    Maximum net irrigation application rate (inches/month) for
                                                 golf course irrigation
-------------------------------------------------------------------------------------------------------------
23. AGRICULTURAL LOW VOLUME MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
-------------------------------------------------------------------------------------------------------------
           note: The following field is repeated on the same record for phase = 1,4.
1-       cutback(zone,trig,5,phase)      Free    Maximum net irrigation application rate (inches/month) for
                                                 low volume irrigation
-------------------------------------------------------------------------------------------------------------
24. AGRICULTURAL OVERHEAD MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
-------------------------------------------------------------------------------------------------------------
           note: The following field is repeated on the same record for phase = 1,4.
1-       cutback(zone,trig,6,phase)      Free    Maximum net irrigation application rate (inches/month) for
                                                 overhead irrigation
-------------------------------------------------------------------------------------------------------------
25. AGRICULTURAL (OTHERS) MAX. NET IRRIGATION APPLICATION RATES: (1 record total)
-------------------------------------------------------------------------------------------------------------
           note: The following field is repeated on the same record for phase = 1,4.
1-       cutback(zone,trig,7,phase)      Free    Maximum net irrigation application rate (inches/month) for
                                                 other irrigation types
-------------------------------------------------------------------------------------------------------------
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